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BRUNO STEFANI

FESTIVE TYROLESE, IN GERMANIC COSTUMES, PARADE DOWN AN ITALIAN STREET

This Bavaria-like scene occurred in Pusteria Valley, part of the Teutonic-populated South Tyrol area awarded Italy in 1919. The region remains Italian by terms of the recent treaty (page 11).

Royal Family Finds Variety in South Africa

UNROLLING before the British royal family on its current tour of the Union of South Africa is a varied panorama of diamonds and gold, pygmies and Bushmen, treeless grass lands abounding in wild game, alplike mountain peaks, grain and cattle ranches (illustration, page 2), and modern industrial cities. The 66-day round trip started from Capetown last week and will end at this same busy corner of Africa on April 24.

In this British dominion of nearly double the area and population of Texas, the visitors will see natural features of great diversity. From the narrow coastal plain which they will follow eastward for two weeks, they will climb across barren terraces, or *karroos*, to the mile-high plateau of mixed grassland and bush that covers most of the country.

Bantu Natives Comprise Two-thirds of Population

The union's latitude south of the Equator corresponds to the Northern Hemisphere position of Texas. Altitude and ocean currents give South Africa a more moderate year-round climate than Texas, and make it well suited to the white man. Europe-derived Boers and Britons now comprise one-fifth of the 11,000,000 people.

There are nearly 8,000,000 natives of the black Bantu races, and small remnants of the Bushmen and the Hottentots. As many as 1,000,000 "coloreds" of mixed blood, and some 200,000 Indians, descendants of Hindu laborers from India, round out the total population figure.

The Boers, descended from the original Dutch colonizers, share with the British element the dominion's government. Development of South Africa's industries and cities has been a half-and-half proposition. The Afrikaans language, variant of Dutch, is official, as is English.

Well-equipped railroads worth nearly a billion dollars link the main cities and most of the other points of interest scheduled for royal visits.

Bloemfontein Boomed as Capital

Four provinces comprise the union. The capitals of three of them share in the dominion government. Capetown, port and capital of Cape of Good Hope Province in the southwest, is the seat of the union parliament. Pretoria, capital of Transvaal, the northern province, is the seat of the governor general and administrative departments.

These two are known as the dual capitals of the union, but there is a third. Bloemfontein, capital of Orange Free State Province, is the judicial capital, being the seat of the dominion's highest courts. Because of its central position, it is advocated as the seat of all branches of government in current agitation for a single capital.

Fourth and smallest province is Natal, east along the Indian Ocean coast. Pietermaritzburg is its capital. At Durban, its big port of 260,000 people, rickshas pulled by Zulus move among fast streetcars and buses. The spectacular Drakensberg Range, containing Natal National Park, rears 11,000 feet and is a barrier between Durban and the interior.

The entire east edge of Transvaal Province constitutes Kruger Na-

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J. P. DE SMIDT

STORM CLOUDS ROLLING OVER STRANGE DINOSAUR-SHAPED MOUNTAINS BRING RAIN FOR THIS FERTILE VALLEY NEAR CAPETOWN

The rich farmlands around the Cape of Good Hope were originally settled by Dutch immigrants and a few French Huguenots. During the Napoleonic wars the English seized the prosperous colony. Rather than submit, the Dutch, or Boers, "trekked" far inland in great numbers and founded the Orange Free State and the Transvaal. When gold and diamonds were discovered in the Boer republics, so many "uitlanders" (foreigners, mostly British) poured in that an incident touched off the South African War in 1899. After bitter fighting, Boers and Britons set up, in 1910, the Union of South Africa (page 3).

Strife-Torn Haifa Palestine's Chief Port

HAIFA, caught in the crosscurrents of British-Jewish-Arab conflict, has developed into Palestine's leading port as well as its most important industrial and commercial center. Situated on the south shore of the Bay of Acre, in the shelter of Mt. Carmel, Haifa drowsed for decades before its period of spectacular growth began.

Between 1922 and 1943 the population of this eastern Mediterranean port jumped from about 24,000 to more than 120,000. Only Jerusalem and the mushroom city of Tel Aviv (both about 140,000) are larger.

A Man-made Harbor Attracts Commerce to Haifa

Railways, airplanes, oil pipe lines, and an expensive new harbor played a part in Haifa's development.

After the First World War, Palestine's trade grew rapidly. To accommodate the merchant ships, which also had grown larger, there was dire need of a good port. As a result of a survey, British engineers recommended that an artificial harbor be built at Haifa. The town lay on the only natural bay along the coast of Palestine.

Two long breakwaters were completed in 1933. The main one, built from stone quarried at Athlit, nine miles south, was 7,250 feet long. This and the shorter one (2,510 feet) enclose a harbor of 278 acres. Back of the new quays—where ships can dock in 30 feet of water—dredgings from the harbor were used to fill in low marshland.

Haifa has been transformed from a sleepy Arab village into a busy modern metropolis. Its wide streets and impressive public buildings—schools, banks, restaurants, hotels, and recreation centers—compare favorably with those in many large Western seaports. Haifa's modernistic department stores and apartment houses, with their sweeping curves and severe straight lines (illustration, page 6), are typical of new architectural forms the world around.

Modern villas dot the slopes and heights of 1,800-foot Mt. Carmel, whence Crusaders once "gazed far o'er the Holy Land." Reforestation carried on by the government maintains the dense green which in Bible times came from vineyards and olive groves. Oaks, pines, shrubbery, and long grass kept fresh and green by the heavy dews cover the mountain sides. Citrus groves in the region add their fruits to Haifa's exports.

Haifa's Technion Trains for Merchant Marine

Between the old part of the town, along the bay, and the mountaintop residential section, the modern Jewish town, Hadar Hacarmel, climbs the slopes of Mt. Carmel. The cultural and shopping center of the city, this district started with the establishment of the Hebrew Technical Institute. Better known as the Technion, this institution comprises a college with departments of architecture and engineering, a high school, and the Haifa Nautical School which trains officers and technicians for the Palestine Merchant Marine. About 1,000 students are enrolled. The institute's library of scientific and technical books is the largest in the Near East.

In normal times the people of Haifa work at the docks, in the oil refineries, cement mills, cigarette and soap factories, machine shops, metal

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tional Park. This wild-game preserve is larger than New Jersey.

Men still living remember Johannesburg, near Pretoria in Transvaal, as a prairie camp of 15 settlers in 1895. Today it is a gold and diamond center of 580,000 people, second only to Cairo in all Africa. Fortunes have been made in the fantastic rises in land values since gold (illustration, below) was found there in 1884. Mines stretching for 50 miles along the Witwatersrand (Ridge of the White Waters) give work to 250,000.

From Pretoria the royal visitors will fly 550 miles northeast to Salisbury, capital of Southern Rhodesia, a self-governing British colony. Near Bulawayo they will see the grave of Cecil Rhodes, a fabulous figure in the development of British South Africa. Victoria Falls will beckon them as it does all visitors to South Africa.

The railroad from the Rhodesias to Capetown goes along the edge of desolate Kalahari Desert and enters the union at Mafeking. The Kimberley diamond diggings, farther south, have been the scenes of some of the most astounding diamond finds in the world.

NOTE: The Union of South Africa is shown on the National Geographic Society's map of Africa. Write the Society's headquarters, Washington 6, D. C., for map list.

For additional information, see "British Commonwealth of Nations," in the *National Geographic Magazine* for April, 1943*; "Cities That Gold and Diamonds Built," December, 1942; and "Busy Corner—the Cape of Good Hope," August, 1942*. (*Issues marked with an asterisk are included in a special list of Magazines available to teachers in packets of ten for $1.00.*)

See also, in the GEOGRAPHIC SCHOOL BULLETINS, November 19, 1945, "South Africa's Diamond-Studded, Gold-Lined Land to Grow Rice."

W. ROBERT MOORE

AT GERMISTON, NEAR JOHANNESBURG, WORKERS WEIGH AND ASSAY $2,240,000 WORTH OF GOLD; THE TRUCKS IN FOREGROUND HOLD THAT AMOUNT OF THE METAL IN SHINING BARS

Big Bend, Down Mexico Way

THE winding Rio Grande carves fantastically eroded canyons ever deeper. Barren clay mesas thrust skyward between overshadowing mountain peaks. Wooded foothills rise out of broad green valleys. These are some of the features, all made fascinating to the eye by nature's coloring, that caused the Big Bend region of Texas to become a national park.

Big Bend National Park is the newest national playground, yet it is one of the oldest in point of history and geology. Motorists driving through Persimmon Gap (the northern entrance to the park) follow the route once taken by conquistador and Comanche. They see fossils which speak of measureless time.

Three Canyons among West's Most Spectacular

The park is named for the right angle of the Rio Grande which outlines a great scallop of west Texas dipping down into Mexico. Along this bend a 100-mile stretch of river doubles as international boundary line and park border. Big Bend's scenery and animal life resemble Mexico's.

On the Rio Grande's swing around Big Bend are three of the most spectacular canyons in the West. The river cuts Santa Helena Canyon (illustration, page 8) through the Mesa de Anguila (Plateau of the Eel) in the westernmost projection of the park. For 15 miles almost vertical walls face each other across the river, which runs deep in this section. Deep pink and purple hues vary with the atmospheric changes.

The southernmost point of the Bend is marked by an even deeper gorge—Mariscal Canyon. It is inaccessible except by pack train, although only a few miles upstream in the direction of Santa Helena the river's overflow irrigates the truck gardens of a few ranches, and level land provides an Army landing field. Near the park's eastern point, the third canyon—Boquillas (little mouths)—cuts a deep gash through the Santiago Range, which across the border becomes Mexico's Del Carmen Mountains.

The entire Chisos Range, covering an area of about 40 square miles, is enclosed in the park. This cluster of peaks, averaging 7,000 feet in altitude, looms through a haze of brilliant colors. Their slopes and gulches are green with piñon, fir, juniper, oak, and cedar.

Park Attracts Visitors Who Seek the "Real" West

The gray-green of such desert plants as yucca, sotol, and cactus, with their bright blossoms, colors the dusty lowlands. Mexican mule deer and bighorn sheep range hill and valley, and the park is being stocked with antelope and elk, which had died out. Tropical birds are included among 200 varieties which are permanent or transient residents.

Established by Congress in 1935, Big Bend National Park was opened to the public in June, 1944. It is still undedicated and little developed. Its wild state combines with a romantic history to attract vacationers who do not mind "roughing it" to some extent and who hanker for the frontier life they have read about and seen in the movies.

At headquarters, near the center of the park on the north slopes of

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works, and power plants.

A pipe line more than 600 miles long brings petroleum from Iraq oil fields. Tankers are fed at the oil-jetty terminus, or by undersea hose that carries the oil from the beach to ships anchored offshore.

Railways link Haifa with Egypt, Turkey, and other Near East states. The city has an airport and a seaplane landing area.

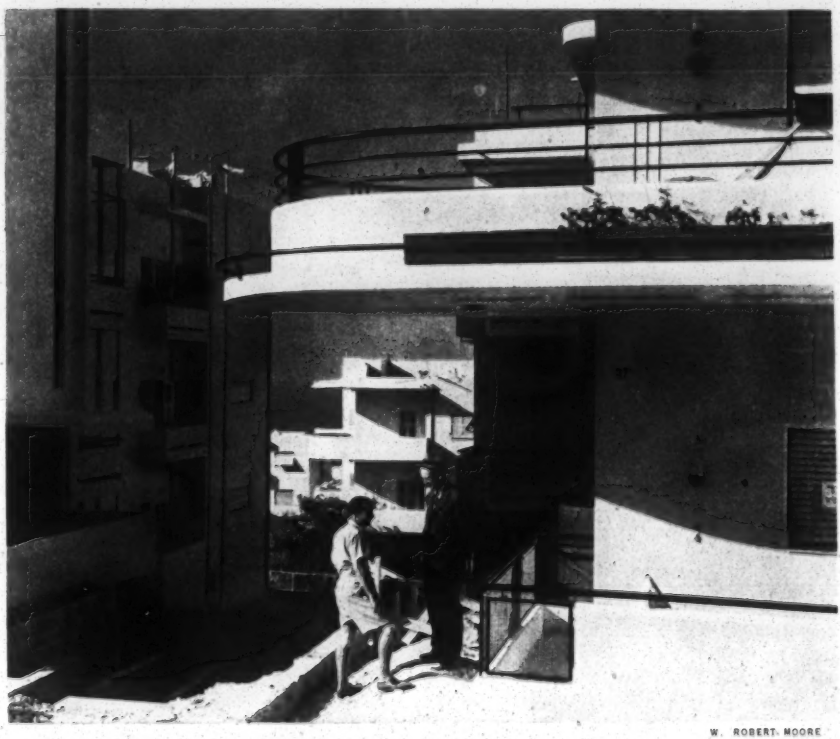
In a land where history is counted in millenniums, Haifa is very young. Its present site was selected little more than a century ago by a pasha of near-by Acre. He transplanted to it the people of the ancient village of Haifa, which had stood to the west of the new site.

In 1869 a colony was established there by a German Lutheran organization composed of peasants from Wurttemberg, Germany. Other Europeans followed, including Jewish colonists and refugees from Nazi-dominated countries who now make up more than half the city's population.

NOTE: Haifa may be located on the Society's map of Bible lands and the Cradle of Western Civilization.

For further information, see "American Fighters Visit Bible Lands," in the March, 1946, issue of the *Magazine;* "Bombs over Bible Lands," August, 1941; "Change Comes to Bible Lands," December, 1938; and "Changing Palestine, April, 1934.

See also, in the GEOGRAPHIC SCHOOL BULLETINS, October 28, 1946, "Political Unrest Is Not New to Palestine."



W. ROBERT MOORE

HAIFA'S HILLSIDE HOMES MIGHT BE CALLED "HOLLYWOOD MEDITERRANEAN" BY ARCHITECTS

Their dazzling white relieved by black iron-rail stripes, balconies of Haifa apartment houses set one above another catch breezes and shade windows. Except for the sign on the Venetian blind (right), these large hill-climbing dwellings might be on California's southern coast.

Molybdenum Found in Jehol's "Bad Lands"

REPORTS of molybdenum deposits in Jehol Province may give factions fighting for north China even more to fight for. Jehol, historically and ethnically part of Inner Mongolia, was overrun by the Japanese in 1931-32 and incorporated into the puppet state of Manchukuo (Manchuria). Since its liberation from the Japanese in 1945, Chinese communists have been in the saddle, though the area is nominally ruled by the nationalist government at Nanking.

Jehol's molybdenum (pronounced mo-LIB-d'num) was especially valuable to the Japanese during the war in making steel. It would be an asset to the industry of a united China.

Used as an alloy, molybdenum gives toughness and hardness to steel. This alloyed metal resists high temperatures and cools without becoming brittle. In ordinary steel the "moly" content is only three-tenths of one per cent. Tool steels contain as much as nine per cent.

Strip of Manchuria Separates Jehol from the Sea

Of the 20,000 metric tons of molybdenum ores and concentrates produced in the world in 1944, the United States accounted for 17,500 tons. Moreover, one mine, located at Climax, high in the Colorado Rockies (illustration, page 10), produced the major portion of the domestic total. Mexico and Canada ranked next to the United States, with 717 and 488 tons, respectively.

Jehol is an inland region, barely cut off from an outlet on the Gulf of Liaotung by a thin strip of Manchuria's Liaoning Province. The Great Wall separates it from China proper. Peiping lies a little more than a hundred miles southwest. Jehol is about the size of South Dakota, whose "Bad Lands" it resembles in many places.

Rising north of the Great Plain of northern China, Jehol is hill and mountain country with deep, narrow valleys and barren peaks that often reach a mile or more in height. There are sections having almost no vegetation; every twig and root is precious for firewood.

The number of Chinese and Mongols who make up the bulk of Jehol's population is estimated at figures which range from less than 1,000,000 to 4,000,000. Some of the people are nomads. Others live in mud-hut villages and subsist by raising a few head of livestock or by growing such crops as millet, beans, sorghum, and wheat.

Japanese Regime Built Better Transport System

Yet Jehol was once the luxurious summer headquarters of the Manchu dynasty. Near its capital, Chengteh, or Jehol, hunting reserves were laid out and an imperial estate established, with palaces, temples and pavilions, arched bridges, and a great lake dotted with man-made islands which gave this spot the name of "China's Fontainebleau."

In recent years, Japanese exploitation considerably improved the transport system of Jehol. Travel on the old roads had been compared to riding in a small boat on a rough sea. Railways now cross the province from Manchuria to Inner Mongolia, and link Chengteh with Peiping and points south.

the Chisos, there is a limited number of housekeeping cabins. Shelter may also be obtained at Castolon, near Santa Helena Canyon, where a combination post office and general store is the center of a small settlement.

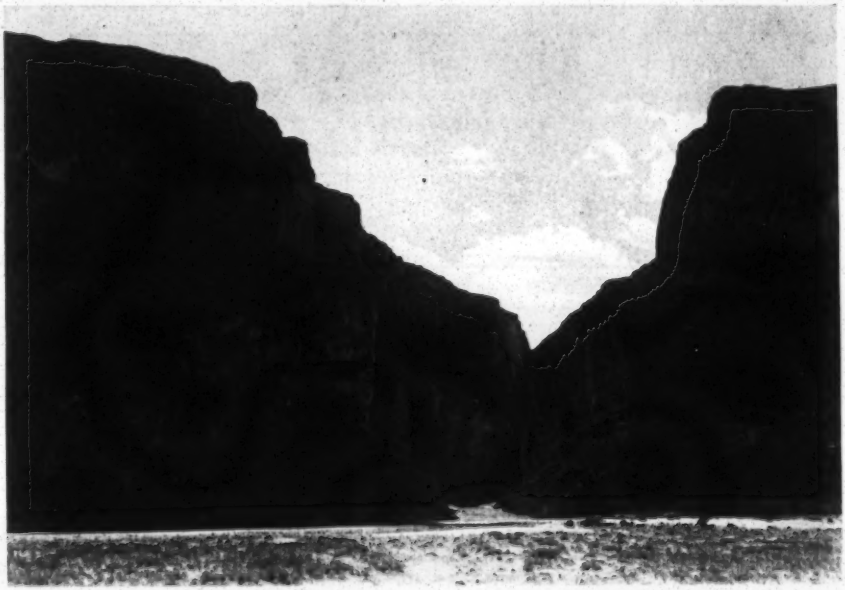
Terlingua, old quicksilver-mining hamlet outside the west entrance to the park, is the region's nearest approach to a town. A group of flat-roofed buildings set at a treeless road junction, the village affords shelter for a few visitors. Food and gasoline may be purchased.

Big Bend's history of nearly four centuries is as varied as its scenery. Spanish conquistadors pushed up through its mountains in the 16th century; Indians from the Great Plains blazed the Comanche Trail to raid below the Rio Grande; smugglers and cattle rustlers carried on their forays across the border.

Big Bend is a paradise for geologists. Rock cliffs and gravel beds reveal aeons of history. Fossils of fish, turtle, and shark offer testimony that the sea once covered the region. Dinosaurs lived in the swamps that followed the withdrawal of the ocean. Giant trees left their petrified trunks.

The nearest railroad and hard-surfaced road run through Marathon, about midway between El Paso and San Antonio. From this small town a gravel road leads south to the park. A few ranches and an occasional gas station are the only signs of civilization. Forty miles south of Marathon the road enters the park. It is another 40 miles to headquarters, and about 20 miles farther south to the Rio Grande. From Alpine, west of Marathon, a longer gravel road enters the park through Terlingua.

NOTE: Big Bend National Park is shown on the Society's Map of the United States.



G. A. GRANT, COURTESY NATIONAL PARK SERVICE

ACROSS THE RIO GRANDE, WHICH CARVED THEM THROUGH THE MESA, THE CLIFFS OF MEXICO'S CHIHUAHUA STATE (left) FACE THOSE OF BIG BEND NATIONAL PARK

Italy Lost Varied Holdings in Peace Treaty

THE Italian peace treaty, signed earlier this month in Paris, reduced Italy's territorial possessions to an area considerably below that held prior to World War I. Regions separated from Italian control were both homeland and colonial. From the French Alps to the Indian Ocean lie large and small bits of land whose status was changed by the treaty. Even the coast of China was affected.

The land surface lost amounted to nearly 900,000 square miles. It included desert wastes and fertile farmlands, populous cities and ports, and lonely mountain districts. An estimated 3,000,000 people were involved in the changes. They were a cross section of the world's inhabitants, ranging from primitive tribesmen to highly advanced peoples. Among them were Christians and Moslems, Slavs and Latins, Arabs, Chinese, Hamites, and Negroes.

African Colonies Biggest Territorial Loss

One long-disputed area, the South Tyrol (illustration, cover), remains with Italy. It had been transferred from Austria after World War I.

Italy's greatest territorial loss, under the present treaty, comes from the renouncing of its former African empire of Libia, Italian Somaliland, and Eritrea. Across the Mediterranean from the Italian "boot," Libia alone is well over twice the size of Texas. Italian Somaliland, reaching 100 to 300 miles inland from the Indian Ocean, and smaller Eritrea, with a long frontage on the Red Sea, together cover about 209,000 square miles.

Acquired late in the partition of Africa, Italy's holdings were widely separated and poor in resources. Torrid Eritrea, which became in 1869 the first Italian foothold on the continent, has a reputation of being one of the most uncomfortably hot spots on earth. Libia, won in the Italo-Turkish War of 1911-12, was called the "desert colony."

The treaties after World War I added only a few border areas to Italy's African possessions. It was not until the invasion of the long-independent native kingdom of Ethiopia in 1935-36 that sizable expansion came. Then the Italians consolidated Ethiopia, Eritrea, and Somaliland into a single unit known as Italian East Africa, and made strenuous efforts to develop it. Libia, too, was intensively colonized.

Istria Goes to Yugoslavia

Now Ethiopia is re-established as an independent nation, and final disposition of Italy's former colonial empire is postponed by the treaty for a year.

In Europe, smaller but more publicized territorial changes took place between Yugoslavia and Italy. The treaty provided that most of the Istrian peninsula at the head of the Adriatic Sea, together with near-by islands and mainland to the north, is to be part of Yugoslavia.

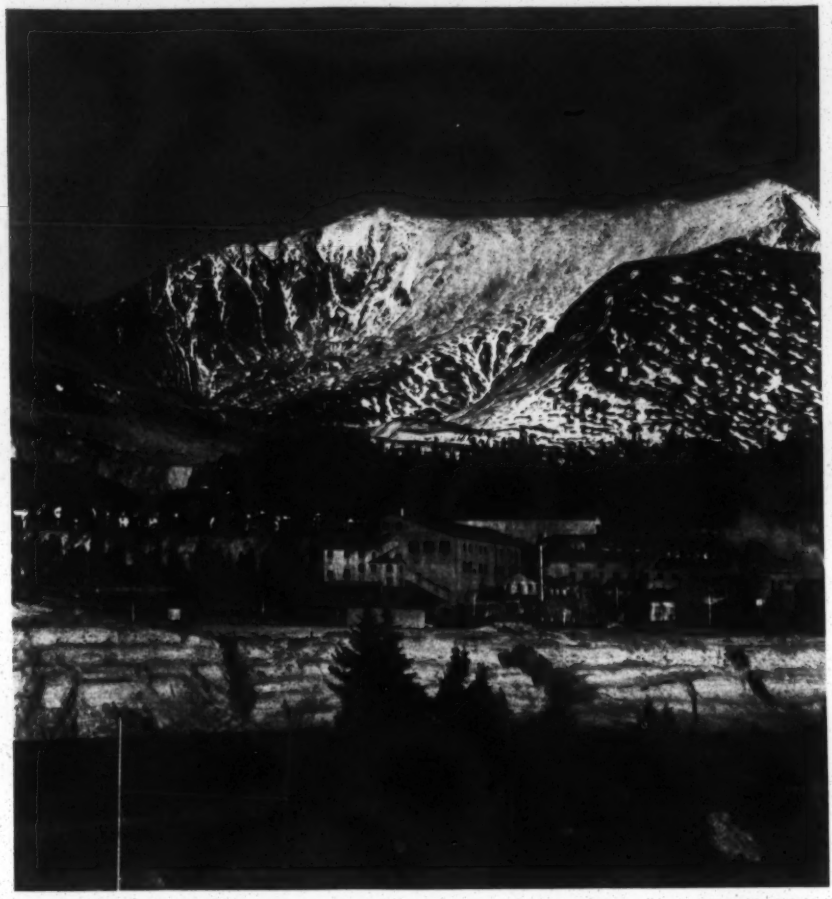
The much-disputed port of Trieste and its environs became an international free territory. Pola, once a naval station of the Austro-Hungarian Empire and after World War I a similar base for the Italians, went to Yugoslavia. Many of its numerous Italian residents have been evacuated to Italy.

Jehol was long noted for mineral wealth. More than 30,000 ounces of silver have been produced annually. Coal is mined in large quantities, with a reserve estimated at more than 650,000,000 tons. Gold and tungsten deposits are reported.

The new molybdenum find is of unknown quantity and quality. If mass-production methods of mining and milling are used the percentage of moly (pronounced like the girl's name) in the ore can be very low. Some United States ores return as little as two-fifths of a pound of molybdenum to a ton, but greater amounts of copper are taken from the same ore.

NOTE: Jehol is shown on the Society's map of China, which appeared as a supplement to the June, 1945, issue of the *National Geographic Magazine.*

For additional information on molybdenum, see "Metal Sinews of Strength," in the *National Geographic Magazine* for April, 1942.



WILLARD R. CULVER

IN THIS MILL AT CLIMAX, COLORADO, MOST OF THE WORLD'S MOLYBDENUM IS REFINED

The ravine at the left, behind the company village, is the beginning of huge "glory holes" caused by "block blasting" sections of the ore-laden mountain side. Efficient milling of a ton of this ore produces six pounds of "moly," a steel-toughening alloy. The enormous residue makes an ever-growing slag pile in the foreground behind the fence.

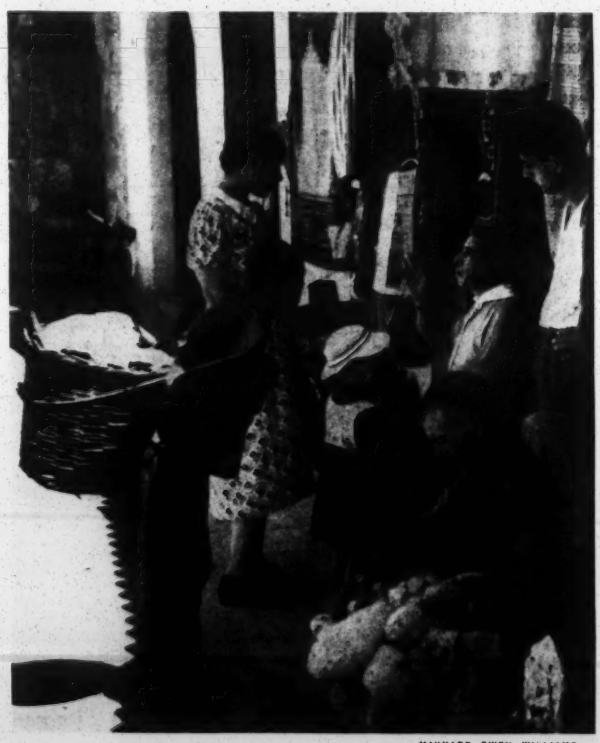
Fiume, another old subject of controversy, also was transferred to Yugoslavia, as were the central Adriatic islands of Pelagosa and Lagosta, and the former Italian enclave of Zara on the Yugoslav shore.

Albania, recognized as sovereign and independent by Italy, got undisputed title to the island of Saseno, on the Albanian side of the entrance to the Adriatic, which was retained when Italian forces left Albania after World War I.

Greece Gains Dodecanese Islands

Minor frontier adjustments were made in favor of France in the high and beautiful Alpine borderland. The Italo-French frontier was pushed eastward at the historic Little St. Bernard Pass, at Mont Cenis, Thabor, Chaberton, and south toward the Riviera coast, in the Tenda and Briga districts.

In the eastern Mediterranean, the long-contested Dodecanese isles are turned over to Greece. These 14 islands, scattered at the entrance to the Aegean, range in size from tiny rock patches to Rhodes (illustration, below) with an area of 545 square miles. Predominantly Greek in language and culture, they were held by Turkey for centuries before Italy seized them during the Italo - Turkish War of 1911-12.



MAYNARD OWEN WILLIAMS

A STREET-SIDE MARKET IN RHODES "HAS EVERYTHING"

Sponges, lace, and embroidery are typical products of this former Italian island. Greek divers gather Aegean sponges.

Farthest from Italy is the former Italian concession at Tientsin in north China. The now-cancelled lease to this 117-acre territory, which held only 373 foreigners in 1937, was granted in 1901.

NOTE: Italy's former colonial possessions may be located on the Society's World Map.

See also, "From Africa to the Alps," (8 color photographs), in the *National Geographic Magazine* for February, 1946; "Return to Florence" and "Northern Italy: Scenic Battleground" (15 photographs, 1 map), in March, 1945; "Behind the Lines in Italy," July, 1944; and "Rhodes, and Italy's Aegean Islands," April, 1941.